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CONTRACT NO. AT(30-1)-1405, Mod. No. 9

## SUPPLEMENTAL AGREEMENT

THIS SUPPLEMENTAL AGREEMENT, entered into the 18th day of February, 1955, by and between THE UNITED STATES OF AMERICA (hereinafter referred to as the "Government"), as represented by the UNITED STATES ATOMIC ENERGY COMMISSION (hereinafter referred to as the "Commission"), and ERIDGEPORT BRASS COMPANY (hereinafter referred to as the "Contractor");

#### WITNESSETH THAT:

WHEREAS, the Government and the Contractor entered into Contract No. AT(30-1)-1405, effective the 26th day of June, 1952, for the performance of certain research work; and

WHEREAS, the parties hereto desire to modify said Contract, as hereinafter provided; and

WHEREAS, the Commission certifies that this Supplemental Agreement is authorized by and executed under the Atomic Energy Act of 1954, in the interest of the common defense and security:

NOW, THEREFORE, Contract No. AT(30-1)-1405 is hereby further modified in the following respects, but in no others:

- 1. Pursuant to the provisions of subdivision a. of paragraph 2. of Appendix "A", the parties hereby mutually agree in writing that the fixed rates to replace the provisional rates for the period from January 1, 1953 through December 31, 1953 shall be Four Dollars and Eleven Cents (\$4.11) for Technical Labor and Six Dollars and Sixty-seven Cents (\$6.67) for Professional Labor.
- 2. In subdivision a.(2) of paragraph 1. of Appendix "A", for the calendar year 1954, delete the provisional billing rate of "Three Dollars and Ten Cents (\$3.10) per hour" and substitute therefor the provisional billing rate of "Three Dollars and Thirty Cents (\$3.30) per hour".
  - 3. Delete subdivision a.(3) of paragraph 1. of Appendix "A".
- 4. In subparagraph l.a. of Appendix "A" add the following new subdivisions "(13)" and "(14)":
  - "(13) Six Dollars and Seven Cents (\$6.07) per hour expended by water cleaner operators in Contractor's Department No. 218.

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- \*(14) Four Dollars and Sixty-five Cents (\$4.65) per hour expended by tool setting operators in Contractor's Departments 218 and 219.
- 5. In the fourth line of subdivision l.i. of Appendix "A", effective as of September 19, 1954, delete the words "Five Hundred Dollars (\$500.00)" and substitute therefor "Two Thousand Dollars (\$2,000.00)".

## 6. In ARTICLE I - WORK:

a. Effective January 1, 1955, except as otherwise specifically stated herein, redesignate Section 1 as Section 1.1.; delete the contents thereof, and substitute therefor the following:

## "l.A. Scope of the Work: Research and Development Project.

"The Contractor shall, at its plants at Bridgeport, Connecticut, and Adrian, Michigan, perform research and development work, the program for which is outlined below, and the details for which shall be as set forth in the classified attachment to the Contractor's letter to the Commission, dated December 2, 1954, designated "Research Department 304", which is incorporated herein by reference and made a part hereof. The program and details thereof shall be subject to such changes as the Commission may from time to time direct and such changes shall become effective upon acceptance by the Contractor. It is understood and agreed that the Extrusion Development work for Thorium under Item I, paragraph 2, of the Program outlined below shall be effective as of October 1, 1954:

#### PROGRAM

## CONTENTS

#### INTRODUCTION

#### I. EXTRUSION DEVELOPMENT

- 1. Uranium and Alloys
- 2. Thorium
- 3. Zirconium and Alloys
- 4. Co-Extrusion
- 5. Direct Measurement of Extrusion Variables

#### II. DRAWING RESEARCH

- 1. Uranium Rod
- 2. Uranium Tube
- 3. Zirconium and Alloy Tube
- 4. Auxiliary Drawing Operations
- 5. Pressure Study

#### III. HANFORD PROCESS TUBE

- 1. Extrusion
- 2. Tube Reducing
- 3. Annealing and Finishing

#### IV. SWAGING

- 1. Uranium
- 2. Swaging for Cored Slugs
- 3. Swaging for Tube Study

#### V. ZIRCONIUM SHELL PROGRAM

- 1. Deep Drawing Tools
- 2. Leak-Detecting
- 3. Annealing
- 4. Lubricant Research
- 5. Roller Strip Orientation

### VI. HAVENS LABORATORY

- 1. Extrusion Control
- 2. Metallographic Research
- 3. X-Ray Research
- 4. Mechanical Property Tests
- 5. Miscellaneous Tests and Service

## VII. PRODUCTION ASSISTANCE "

#### b. Add the following new Section 1.B:

### "1.B. Scope of the Work: Adrian Semi-Production Project

"The Contractor shall, at its plant at Adrian, Michigan, furnish all personnel, facilities, materials (except for Government-furnished billets of thorium, uranium or related alloys), equipment (except for Government-furnished equipment) required to produce, and shall exert its best efforts to produce approximately 1600 extruded rods or tubes meeting the following specifications, which shall be subject to such changes in rod or tube sizes, dimensions, tolerances or other specifications required as the Commission may direct:

7" 0.D., 1 7/16" I.D. and 12" long at approx.  $600^{\circ}$  C. to product tubes 1.475 - 1.480" 0.D. and 0.375  $\pm$  1/16" I.D.";

for delivery in accordance with the following schedule mutually agreed upon for the supply of billets by the Commission to the Contractor and the extrusion of such billets by the Contractor:

Week of October 26	-	48 billets
Week of November 22	-	96 •
Week of December 13	_	96 <b>n</b>
Week of January 10	-	384 <b>"</b>
Week of February 7	-	384 "
Week of March 14	-	576 *.

Deliveries of extruded rods or tubes shall be made by the Contractor in such quantities and during such periods as the Commission may require, and shall be subject to such changes in delivery schedules as the Commission may direct."

## 7. In ARTICLE XI - TERM, EXPIRATION AND TERMINATION:

- a. Redesignate Section 1. as Section 1.a., and in said Section 1.a., delete "December 31, 1954" and substitute therefor "December 31, 1955".
  - b. Add the following new Section 1.b.:
    - "b. The period of performance of the work described in Section 1.B. of ARTICLE I - WORK shall commence October 26, 1954 and shall terminate on or about April 1, 1955."
- 8. a. In connection with the semi-production project at Adrian, Michigan, described in Section 1.B. of ARTICLE I WORK, the provisional budget and various charge rates for the cost of performing the work shall be as set forth in Pages Nos. 1 and 2 of Appendix "B" to the contract, which are attached hereto and made a part hereof, covering, respectively, the estimated cost for performing the work and the cost estimate for initial equipment.
- b. The foregoing rates shall be established as provisional billing rates for the calendar year 1954 portion of this semi-production program; the actual, firm rates to be established as provided in this

paragraph. As soon as mutually convenient, after the end of calendar year 1954, the Contractor shall submit to the Commission proposed revised rates with supporting data for verification, audit and review by the Commission. Following said review the parties shall mutually agree in writing upon the fixed rates to replace said provisional rates for 1954. Until such provisional rates are fixed the provisional rates for 1954 will continue to be used as provisional rates for 1955. The fixed rates for 1954 when established shall become the provisional rates for the period or periods subsequent to December 31, 1954, until said provisional rates are replaced by fixed rates in the same manner as provided for above; and in turn said fixed rates shall become the provisional rates for subsequent periods. Any failure to agree shall be resolved as a dispute under paragraph 9. Disputes. of Article IV.

- 9. In the first sentence of paragraph 5. of Appendix "A" substitute "Thirty-one Thousand, Five Hundred Eighty-two Dollars and Eleven Cents (\$31,582.11)" for "Fourteen Thousand, Eighty-two Dollars and Eleven Cents (\$14,082.11)"; delete the period at the end of the first sentence and add thereto the following: "for research and development work to be performed under the contract; and the Contractor shall receive a fixed fee of Five Thousand, Eight Hundred Fifty Dollars (\$5,850.00) for the performance of the semi-production project described in Section 1.B. of ARTICLE I WORK. It is understood and agreed that no fee is to be received by the Contractor applicable to the facility portion of the work."
  - 10. In paragraph 1. of ARTICLE VI LIMIT OF GOVERNMENTAL LIABILITY:
- a. Delete the first sentence thereof and substitute therefor the following:

"The initially estimated cost of research and development work under this contract, including the fixed fee set forth in Appendix "A" to this contract, is Seven Hundred and Ninety-one Thousand, Five Hundred Dollars (\$791,500.00). The initially estimated cost of the work of the semi-production project at Adrian, Michigan, under this contract, including the fixed fee set forth in the November 5, 1954 letter of the Contractor to the Commission, is One Hundred Twenty-four Thousand, Three Hundred Twenty-one Dollars (\$124,321.00)."

- b. In paragraph 2. of ARTICLE VI, "Four Hundred Ten Thousand Dollars (\$410,000.00)" wherever the same appears is changed to "Six Hundred Forty-five Thousand, Six Hundred Seventy-two Dollars (\$645,672.00)".
- 11. In ARTICLE II FISCAL PROVISIONS, paragraphs 1. and 3., ARTICLE IV MISCELLANEOUS PROVISIONS, paragraph 1., and ARTICLE V GOVERNMENT PROPERTY, paragraph 1., wherever reference is made to Appendix "A" add the words "and Appendix 'B'".

12. Except as otherwise specified herein or to the extent inconsistent herewith, the provisions of Appendix "A" shall be applicable to Section 1.B. as well as Section 1.A. of ARTICLE I - WORK.

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All other terms and condition the terms of this Supplemental Agreefect.	ns of the contract not inconsistent with eement shall remain in full force and
IN WITNESS WHEREOF, the part the day and year first above writt	ies have executed this Supplemental Agreement en.
	THE UNITED STATES OF AMERICA
	BY: UNITED STATES ATOMIC ENERGY COMMISSION
	BY: s/S. R. Sapirie
	TITLE: Manager, Oak Ridge Operations Contracting Officer
Witnesses to execution by the	ERIDGEPORT BRASS COMPANY
Contractor;	BY: s/W. R. Breetz
s/ Jane P. Uschold	TITLE: Vice President and Treasurer
30 Cross Highway, Westport, Conn.	
(Address)	
s/ Janet C. Kraynick	
285 Nichols Street, Bridgeport, Co (Address)	nn.
I, Joseph P. McNamara Secretary of the cor W. R. Breets	certify that I am the <u>Assistant</u> poration named as Contractor herein; that ho signed this Supplemental Agreement on be- ice Pres. and Treasurer of said corporation;
that said Supplemental Agreement w	ice Pres. and Treasurer of said corporation; as duly signed for and on behalf of said verning body and is within the scope of its
IN WITNESS WHEREOF, I have h said corporation.	ereunto affixed my hand and the seal of
	s/ Joseph P. McNamara
(Corporate Seal)	

# Estimated Cost of Performing Adrian Semi-Production Project

# Contract AT-(30-1)-1405

Extrusion Press	
200 Hours • \$45.55 per hour	\$ 9,110
Fixed monthly charge for press and auxiliary equipment (\$2,105 x 6 months)	12,630
Stretch Straightener	
100 hours • \$10 per hour	1,000
General Labor	
600 hours • \$2.82 per hour	1,692
Tool Maintenance (estimated)	
Dies (125 @ approximately \$32) - \$4,000  Cones (1,584 @ approximately \$15) - 23,760  Mandrels (125 @ approximately \$40) - 5,000  Tips (250 @ approximately \$15) - 3,750  Dummy Blocks (40 @ approximately \$50) - 2,000  Shear Blades (16 pairs @ approximately \$25) - 400	•
	38,910
Machine Maintenance (estimated)	
Estimated \$1,000 per month for 6 months	6,000
Operating Supplies (estimated)	1,800
Professional Help	
180 hours @ \$6.83	1,229
Technical Help	
2,820 hours • \$3.97	11,195
Rental Due on Use of Equipment Owned by USAF	6,705
TOTAL OPERATING COST	\$90,271

## Cost Estimate of Initial Equipment for Adrian Semi-Production Project

Item	Amount
Billet Feed for Weighing	\$ 200
Enclosure of Area	5,000
Storage Racks	1,200
Billet Conveyor	1,200
Standby Billet Furnace	7,500
Protective Clothing	500
Tongs, etc.	.50
Quenching Fixture, Rod	1,500
Run-out Table	500
Small Tools	500
Quench Tank Extension	250
Drying Fan	200
Saw Racks	500
Crane Hook	1,000
Rod Racks	1,500
Vacuum Cleaner, Industrial	500
Water Hose	200
Incinerator	500
Fire Equipment	500
Change Area (Showers)	3,000
Lockers	400
Move Stretch Straightener	1,500
	\$28,200